

# New Things in War---How the Aeroplane, Zeppelin, Auto and Submarine Have Revolutionized Modern Methods of Battle Among the Nations



## MODERN METHODS OF WAR IN AIR, ON EARTH, UNDER SEA, ARE PUT TO TEST IN EUROPE

Conflict of Many Nations Gives First Opportunity for Real Proof of the Value of Aeroplane, Auto, Zeppelin and Submarine.

By JOHN S. GREGORY.  
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WAR is now waged on earth, in the air, on the sea and beneath the water thereof with the aid of numerous devices never before tested in actual hostilities. Aeroplanes, automobiles and submarines have been used in previous wars, to be sure, but on scarcely more than an experimental scale. All have been greatly improved since these tests, and many accessories have been added. Radical changes, believed to be improvements, have also been made in more familiar material and methods. Altogether some of its devotees profess to believe that the art of war has been revolutionized. Whether it has or not the world will soon know.

Most spectacular of new developments in warfare is the advent of the aeroplane and the aeroplane on an imposing scale. Military authorities of all Europe appear to have become convinced of the value of these new fighting machines. At least, France, Germany and Russia and, more recently, England, have displayed an energy amounting to frenzy in the development of these machines. With a current appropriation of \$32,500,000 for the purpose, Germany set out to offset England's naval supremacy by building a great fleet of dirigibles. At first the British War Department professed to scoff at Germany's purpose, but after contemplating the possibility of a fleet of airships flying across the North Sea a comprehensive programme for building air craft was undertaken in haste.

Millions have been lavished on experiments with air craft; aviators have been drilled by hundreds; every contingency in war that could be foreseen has been tested at the annual army manoeuvres of the great nations. The result has been the development of two widely different types of flying machines, each of which has its own peculiar sphere of usefulness.

Germany pins her faith to the dirigible, "The Drednought of the Air," of which two principal types have been developed, the Zeppelin and the Schutte-Lans. These monsters are from 400 to 500 feet long, have a speed of fifty to seventy miles an hour, a cruising radius of 1,200 to 2,000 miles, and a carrying capacity of from eight to ten tons. They are armored against rifle and machine gun bullets, carry small guns, wireless telegraph and a crew of twenty to thirty men.

As an indication of their reliability the Zeppelin Company announced that out of 234 days from Jan. 1 to Dec. 1, 1912, their airships flew on 206 days, being up a total of 1,187 hours and covering a distance of 41,145 miles and carrying a total of 10,291 persons, including 5,609 members of the crews and 4,682 passengers, all without a single fatal accident.

From the German point of view these craft are battleships of great destructive power, for they can release half a ton of explosives at once; and in experiments they have completely shot to pieces the allhouettes

field. Its transport consists of three automobiles for the crew, two motorcycles, six motor trucks with "protectors," an extra pair of trailing wheels on which the aeroplanes, folded, are hauled, and two workhorses on motor trucks. One of these aviation camps was struck, packed and ready to move in less than an hour at the 1913 manoeuvres.

### NEW ART OF OBSERVATION IN MIDAIR.

The aeroplane scout must fly high and swiftly to avoid hostile bullets. At an altitude of 3,000 feet, at which he is fairly safe, he has a range of vision of four to five miles. Troops on the march can be seen and their number estimated by the road space occupied. Artillery in action is easily distinguishable, as are cavalry and transport of all kinds on the move. Massed infantry in the open is fairly distinct, though khaki-clad men in open order or moving over stubble or ploughed fields are difficult to distinguish, and they are not always readily seen on grass. The flying scout can readily obtain an idea of the disposition of the enemy's forces, of the occupation of bridges and roads, of the works, if their color and outlines do not blend with the landscape, can be seen at a distance of five miles, though they are not readily distinguishable. It is difficult for the aviator to tell "dummy" trenches from real ones.

Aerial scouting is superb. The commanding general can count on having any specified region examined. The art of observation from the air has been reduced to a system of exacting regulations, and the aviator is also distinguished by his success in aerial scouting. Yet there is another side to the story, for aviators are as far from perfection as their fellow mortals are in other ways. At the 1913 manoeuvres a French general and his staff were surprised and captured despite the utmost vigilance of their aerial scouts. A British "Blue" division of 12,000 men with horses stole a march on the "Red" division while the aerial scouts of the latter were hunting for it. The men skulked along under hedgerows and other cover, while guns and transport wagons were hidden under straw so that they might be mistaken for farmers' wagons. Whenever an aeroplane came into view a whistle from the "Blue" lookouts warned every man to crouch in his tracks or under the nearest cover. Aerial scouts have been repeatedly deceived by German manoeuvres.

Although the Germans claim to have dropped bombs from an altitude of 5,000 feet on a target fifteen feet in diameter, extravagant claims regarding the effectiveness of aerial bombs must be accepted with reservations. In a lecture before the Brooklyn Aeronautical Association a tremendous amount of dense smoke which spreads in a great cloud under cover of which the aviator may possibly have a chance to make his escape.

Still another bomb is charged with 150 pounds of chemicals which, upon exploding, is supposed to fill the air with gases so poisonous that every living creature within radius of a hundred yards will be killed, and the influence of the gas is expected to extend to a lesser degree to twice that distance.

The French have a message carrier, to be dropped by an aviator who wishes to continue his flight, consisting of a brass tube in which the message is enclosed with a charge of Bengal fire, which is ignited by a firing pin on striking the earth. The fire and smoke mark the spot long enough for a man to reach it from a distance of three hundred yards.

Experiments in defense against hostile aeroplanes and airships have been quite as elaborate as those in offensive operations. It has been found, for instance, that at 2,000 feet an aeroplane is a hard thing to hit, though experience in actual warfare has shown that an aeroplane at

### AEROPLANES VERSUS SUBMARINES.

A curious development in aerial navigation has been the pitting of the airship against the submarine. In fairly clear and smooth water submarines and even submarine mines can be readily seen from the lofty outlook of an airship or aeroplane. As the submarine moves slowly when under water a battleship guarded by aerial scouts might be able to manoeuvre out of the way. It has also been proposed to use the airship as a mine destroyer by dropping bombs near enough to the mines to explode them, the ships following close enough in the wake of the aerial pilot to avoid other mines outside the cleared zone.

At all events, England regards the airship as such an important naval auxiliary that the dirigibles have all been turned over to the navy, the army retaining only aeroplanes. The navy also has a number of seaplanes, and the naval appropriation for the current year carries an item of \$400,000 for the construction of a new ship for carrying aeroplanes. This will be the first vessel of the kind ever constructed for this special purpose, though France has two makeshift vessels of the kind.

Accessories to be used by or in connection with air craft are innumerable. Although Germany has no fewer than thirty airship sheds between Berlin and the frontier of France, special railroad cars have been provided with hydrogen gas with which to inflate the huge dirigibles. These cars are always ready and can be rushed anywhere they may be needed in a hurry. The airship stations are equipped to facilitate night work, being provided with electric searchlights and each station having its own code of signals for aerial pilots. The dirigibles are equipped with searchlights to aid in night work.

The actual number of craft in these aerial fleets is known only to their respective governments. Published statements differ so widely that the following figures can be offered only as probably the most trustworthy approximation:

### DUAL ALLIANCE

Germany, Austria-Hungary, 22 320

Austria-Hungary, 22 100

France, 29 420

Russia, 10 164

Great Britain, 4 250

Belgium, 2 40

Serbia, 1 18

Montenegro, 1 1

Total, 34 1,299

TRIPLE ENTENTE AND ALLIES

France, 29 420

Russia, 10 164

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(Second installment will be printed to-morrow.)

## RAKES IN \$1,000,000 PROFIT ON 100,000 BAGS OF RAW SUGAR

Southern Planter One of a Number Who Got a Harvest Out of War Prices.

A profit of \$1,000,000 for one ordinary man in a few weeks seems like a fairy tale to the average human being, who has reason to believe that so much money could only be obtained in so short a time by wrecking a railroad or other gigantic and illicit operation, but this million was gathered simply.

A Southern planter had 100,000 bags of raw sugar that cost 2 cents a pound, and recently he sold it in the warehouse at 5 cents a pound, reaping a profit of 3 cents a pound on 220 pounds to a bag, which is equal to a profit of \$10 on each of the 100,000 bags.

Raw sugar sold last March as low as 1.25-1.50 cents a pound. Since the war the price has soared beyond 61-2 cents, giving the sugar industry a chance of a lifetime, as the total world production is about 18,000,000 tons, and about half of this is produced by the warring nations.

It is easy to figure out that there is likely to be a sugar shortage for some time after the war is over, as most of the seed for the beet sugar made here comes from abroad. A broker in the sugar trade, who did not want his name mentioned, recently bought 10,000 bags of sugar at 55-5 cents and sold at an advance the next day, making \$27,000 profit over night.

### FRANCE WILL OPPOSE STEAMSHIP PURCHASES AS AN AID TO GERMANY.

WASHINGTON, Aug. 28.—An ambassador Jusseland of France has indicated in a long talk with President Wilson, it is understood, that his Government will view with displeasure the purchase by the United States for its merchant marine of any German owned ships.

M. Jusseland contended, it is said, that great sums of money would be placed in German hands through the sale of vessels now marooned in neutral ports. This would be tantamount to raising money through the agency of the United States.

Furthermore, he argues, it is understood that as the allies have swept the seas clear of German commerce the United States would be giving resources for food supplies to Germany which otherwise she would not get. If the establishment of an American Government shipping line would enable Germany to feed not only her people at home but her troops in the field, such an operation, M. Jusseland held, would be in violation of neutrality.

### 40 GERMAN RESERVISTS WHO LEFT NEW YORK, SEIZED BY THE BRITISH.

NAPLES, Aug. 28 (United Press).—On the arrival here to-day of the steamer Caserta from New York, her captain reported that British seamen boarded her at Gibraltar and took off forty German reservists who were en route to the United States.

## ITALIAN RESERVISTS ARE NOT CALLED OUT, SAYS CONSUL-GENERAL

But 500 a Day Called on Him to Have Their Books Vised.

A report that the Italian Government had called out its reservists in this country was denied to-day by G. Para Forni, the Italian Consul General. Nevertheless his office at No. 226 Lafayette street swarms with sons of Italy who are pledged to go back and fight if called.

"For the last week," said the Consul-General, "reservists have been coming in here at the rate of 500 a day to get their books vised. Each reservist carries a book which must be submitted to the Consul at stated periods in order that the Government may keep track of him."

"These men are coming in for the purpose of letting us know that they will be within call if needed. They think that Italy will be drawn into the war."

There are probably 5,000 Italian reservists subject to the first call in Manhattan and the Bronx and 10,000 in the State of New York. If there should be a call for the reservists they would assemble in this city preparatory to taking passage on ships of their own nation for the scene of mobilization abroad.

Many of the men who called to-day to have their books vised were accompanied by their wives and children. They were serious but determined. Some of the women were a trifle hysterical over the prospect of leaving their husbands, but generally the demeanor of the visitors indicated that if Italy calls for soldiers those who are obliged to answer the call from New York will do so without any great fuss or excitement.

### CANADIAN BOY SOLDIER SHOT BY UNSEEN ASSAILANT WHILE GUARDING A CANAL

MONTREAL, Aug. 28.—Sixteen-year-old Gordon Betts, private in the Fifth Royal Highlanders, was shot in the eye and killed to-day by an unseen assailant while on sentry duty at the canal at Soulanges.

Since the outbreak of the war a guard has been placed over all canals in the Dominion to prevent their being injured by dynamite soldiers at Soulanges, guarding the canal have been fired on repeatedly during the last few days.

### GERMAN TROOPS ATTACK BELGIANS IN AFRICA; ALLIES WILL DEFEND

PARIS, Aug. 28 (Associated Press).—A despatch to the Havas Agency from Libreville, in the French Congo, says that the Belgian Congo has been attacked by German troops.

The Belgian administration, in accordance with Great Britain, has taken defensive measures and has informed the French Government of its action.

## TOURISTS IN VIENNA WILL RETURN HOME THROUGH GERMANY

Breckinridge Reaches There With Funds for Stranded American Travellers.

ROME, Aug. 27, via Paris, Aug. 28 (Associated Press).—Advices from Vienna report that Henry S. Breckinridge, Assistant Secretary of War at Washington, arrived there from Berlin Wednesday and began the work of aiding needy Americans.

Aided by Frederick C. Penfield, the American Ambassador, he opened a relief bureau in the evening in the Hotel Imperial. Special messengers were despatched to the addresses of all Americans who had applied to the Embassy for assistance, directing them to come personally to the bureau. The next day the bureau was crowded with Americans from early morning until midday.

Monetary relief was asked for by comparatively few of the callers, their demands chiefly being for transportation to America.

It is estimated that there are between 400 and 500 Americans in Vienna, a majority of whom are prosperous, but anxious to return home quickly. There is a much larger number in Budapest, where Capt. Cross has already gone with \$1,500 in gold. According to the latest information, the total number of Americans now in Austria-Hungary is about 1,500.

Accelerated train service is now running between Vienna and Berlin and Americans returning home will be able to travel this route to get to Holland.

Mr. Breckinridge, accompanied by Ambassador Penfield, visited the Foreign Office and also the Minister of War. He was most cordially received everywhere. The officials expressed a desire to facilitate his work and Mr. Breckinridge hopes he will finish up here Friday evening, when he will go to Switzerland. He will leave a member of the commission here until the work of relief is finished.

LONDON, Aug. 28 (Associated Press).—Refugees who arrived in London to-day from Flushing include Mr. and Mrs. Lorenz of Brooklyn. Mr. Lorenz had been at Otterweil, near Kiel, for a month, trying to get away. He reached Rotterdam via Mannheim, Stuttgart and The Hague. Over 900 Americans are waiting at Mannheim to get away, according to Mr. Lorenz, some of whom said they were afraid to cross the Channel because of the mines.

Other American arrivals in London have return tickets and plenty of Dutch and German paper money, but were unable to change it. These are being financed by the relief committee.

The American Embassy has received a despatch from American Ambassador Gerard at Berlin by way of Copenhagen, stating that a special train would arrive at Flushing this morning bringing 600 American refugees from Germany. These passengers had been left stranded and are being sent through by the Embassy.

Another despatch from Bergen, Norway, says a number of refugees have arrived there from Russia. They report very few of their countrymen are left in Russia.

Nine hundred Americans left on a special train from Geneva this morning. The train is due in Paris some time to-day.

### SCOTCH FISHING BOAT SUNK BY A MINE OFF ENGLISH COAST.

LONDON, Aug. 28.—Five members of the crew of a Scotch fishing craft, which has been sunk by a floating mine thirty miles off B. Northumberland, were landed at Hull to-day.

## DRESDEN TAKES BRITISH STEAMER BUT LETS HER GO

First Makes Drumcliff's Captain and Crew Sign Papers of Neutrality.

Capt. Evans of the British freight steamer Drumcliff, reported on her arrival here to-day from Buenos Ayres and Trinidad that on Aug. 6, off the coast of Brazil, his ship was halted by the German cruiser Dresden, and that he was compelled by the Dresden's commander to sign a pledge not to fight against Germany.

Capt. Evans said that he had given the pledge only because he feared for the safety of his wife and child, who were on board.

The German boarding party came alongside, he said, with rifles pointed while the cruiser stood by with her guns trained on the ship. The Germans destroyed the Drumcliff's wireless apparatus, and the Dresden, after standing near the freighter for nearly four hours, steamed east.

### GERMAN LLOYD SHIP MAKES READY TO SLIP OUT WITH COAL CARGO

Suppressed but evident activity about and aboard the North German Lloyd steamship Grosser Kuersfurt, which is docked at Hoboken, gave rise to the report to-day that this vessel, loaded to capacity with coal, is getting ready to slip out to sea. No confirmation of the report could be obtained at the North German Lloyd offices and no application has been made at the Customs House for clearance papers, but it was admitted in Hoboken that the Grosser Kuersfurt has taken on an awful lot of coal.

It is supposed that this coal is intended for one of the German cruisers in the Atlantic. It is true that the Grosser Kuersfurt has taken on coal for a war vessel there is no way by which this Government can prevent her from sailing. Her clearance papers will have to be respected for the act of leaving a neutral harbor with coal aboard does not constitute a violation of neutrality.

The Grosser Kuersfurt, of 10,000 ton displacement, is one of the old vessels of the line. Should she be destroyed by the warships of an enemy the steamship company could call on the German Government for payment of the loss sustained.

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